

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-13. (Canceled).

14. (currently amended): A method for the preparation of a curable resin composition, comprising the steps of:

preparing an acrylic resin (i-2) by constructing monomers by polymerization in presence of a solvent, wherein said solvent includes an epoxy resin (i-1); said characterized in that there is prepared an acrylic resin (i-2) having has functional groups which are capable of reacting with ionic species in a curable resin composition that is free of a volatile solvent under a condition of the absence of a volatile solvent by polymerizing monomers constructing an acrylic resin (i-2) with an epoxy compound (i-1); ; and

preparing a curable resin composition by combining: said curable resin composition comprising (i-1) an said epoxy compound, wherein said epoxy compound has having an ionic polymerizability and viscosity of not more than 1,000 cP at 25°C, (i-2) an acrylic resin having an ionic polymerizable functional group, and (3) a thermally-activating ionic polymerization catalyst which can be dissolved by heating and crystallized by cooling; said polymerization catalyst having a substituted hydrocarbon group having a carbon number of more than 10, or a nonsubstituted hydrocarbon group having a carbon number of more than 10, or a cyclic organic structure having a more than 10 carbon number hydrocarbon group.

Claims 15-17. (Canceled).

18. (previously presented): A solvent-based coating composition which comprises (ii-1) an epoxy compound having at least two cycloaliphatic epoxy groups in the molecule and a number average molecular weight of not more than 2,000, (ii-2) an acrylic resin containing an epoxy group and having a number average molecular weight of 2,000-50,000, a hydroxyl group value of 10-250 mgKOH/g, and an epoxy equivalent of not more than 300, and (3) a thermally-activating ionic polymerization catalyst which can dissolve by heating and crystallize by cooling; wherein said epoxy compound (ii-1) is mixed with an additional epoxy selected from the group consisting of bisphenol-type epoxy compound, a novolak-type epoxy compound, and a brominated-type epoxy compound thereof.

19. (previously presented): A solvent-based coating composition according to claim 18, wherein oxirane oxygen concentration is 5-11% by weight in a resin composition composed of said epoxy compound (ii-1) and said acrylic resin (ii-2) containing an epoxy group.

20. (previously presented): A solvent-based coating composition according to claim 19, wherein said thermally-activating ionic polymerization catalyst (3) can be dissolved by heating and crystallized by cooling; said polymerization catalyst having a substituted hydrocarbon group having a carbon number of more than 10, or a nonsubstituted hydrocarbon group having a carbon number of more than 10, or a cyclic organic structure having a more than 10 carbon number hydrocarbon group,

wherein said thermally-activating ionic polymerization catalyst (3) contains at least one selected from the group consisting of a cationic polymerization catalyst (3') and a metal compound (3").

21. (previously presented): A coating for cars, comprising: a solvent-based coating composition comprising (ii-1) an epoxy compound having at least two cycloaliphatic epoxy groups in the molecule and a number average molecular weight of not more than 2,000, (ii-2) an acrylic resin containing an epoxy group and having a number average molecular weight of 2,000-50,000, a hydroxyl group value of 10-250 mgKOH/g, and an epoxy equivalent of not more than 300, and (3) a thermally-activating ionic polymerization catalyst which can dissolve by heating and crystallize by cooling; wherein said epoxy compound (ii-1) is mixed with an additional epoxy selected from the group consisting of bisphenol-type epoxy compound, a novolak-type epoxy compound, and a brominated-type epoxy compound thereof.

22. (previously presented): A coated article comprising a substrate and a coating on said substrate, wherein said coating is formed from curing the curable resin composition set forth in claim 18 .

Claims 23-32. (canceled).

33. (previously presented): A color filter comprising:

a protecting layer comprising a coating formed from curing a curable resin composition which comprises (iv-1) an epoxy resin having ionic polymerizability and (3) a thermally-activating ionic polymerization catalyst which can dissolve by heating and crystallize by cooling; said polymerization catalyst having a substituted hydrocarbon group having a carbon number of more than 10, or a nonsubstituted hydrocarbon group having a carbon number of more than 10, or a cyclic organic structure having a more than 10 carbon number hydrocarbon group, wherein said protecting layer is deposited on a substrate.

34. (previously presented): A liquid crystal display device comprising:

a protecting layer for a color filter comprising a coating formed from curing a curable resin composition which comprises (iv-1) an epoxy resin having ionic polymerizability and (3) a thermally-activating ionic polymerization catalyst which can dissolve by heating and crystallize by cooling; said polymerization catalyst having a substituted hydrocarbon group having a carbon number of more than 10, or a nonsubstituted hydrocarbon group having a carbon number of more than 10, or a cyclic organic structure having a more than 10 carbon number hydrocarbon group, wherein said protecting layer is deposited on a substrate.

Claims 35-37. (canceled).

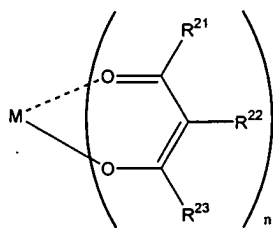
38. (previously presented): A curable resin composition comprising: (v-1) an epoxy compound having ionic polymerizability and a viscosity of not more than 1,000 cP at 25°C, (v-4) an oxetane compound having 1-6 oxetane rings per molecule, and (3) a thermally-activating ionic polymerization catalyst which can dissolve by heating and crystallize by cooling; said polymerization catalyst having a substituted hydrocarbon group having a carbon number of more than 10, or a nonsubstituted hydrocarbon group having a carbon number of more than 10, or a cyclic organic structure having a more than 10 carbon number hydrocarbon group, wherein said epoxy compound (v-1) is mixed with an additional epoxy selected from the group consisting of a bisphenol-type epoxy compound, a novolak-type epoxy compound, and a brominated-type epoxy compound thereof.

Claims 39-42. (canceled).

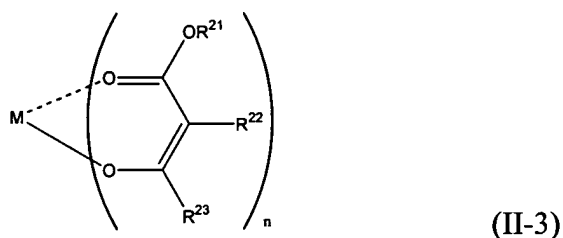
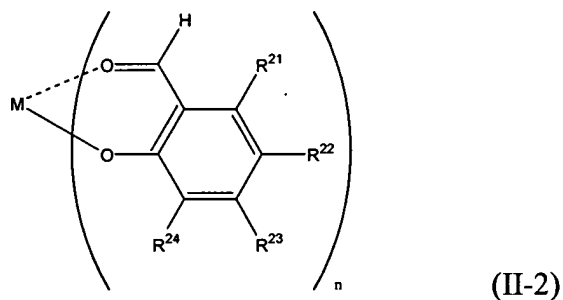
43. (previously presented): A solvent-based coating composition which comprises (ii-1) an epoxy compound having at least two cycloaliphatic epoxy groups in the molecule and a number average molecular weight of not more than 2,000, (ii-2) an acrylic resin containing an epoxy group and having a number average molecular weight of 2,000-50,000, a hydroxyl group value of 10-250 mgKOH/g, and an epoxy equivalent of not more than 300, and (3) a thermally-activating ionic polymerization catalyst which can dissolve by heating and crystallize by cooling; wherein said epoxy group in said acrylic resin (ii-2) containing an epoxy group is a cycloaliphatic epoxy group or an epoxy group derived from glycidylmethacrylate and wherein said epoxy compound (ii-1) is mixed with an additional epoxy selected from the group consisting of a bisphenol-type epoxy compound, a novolak-type epoxy compound, and a brominated-type epoxy compound thereof.

Claims 44-53. (Canceled).

54. (previously presented): A solvent-based coating composition according to claim 20, wherein said metal compound (3") is at least one kind selected from the group consisting of a compound represented by general formula (II-1), a compound represented by general formula (II-2), and a compound represented by general formula (II-3):



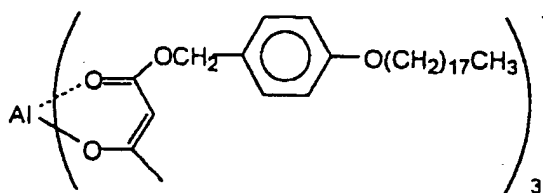
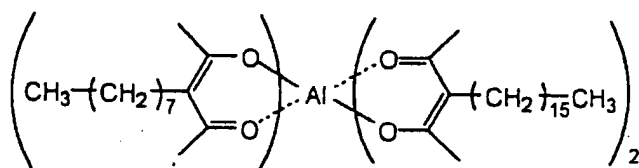
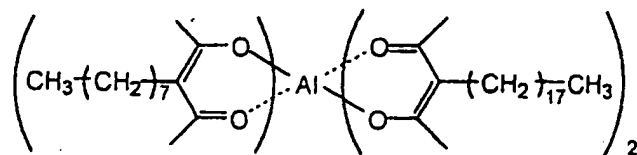
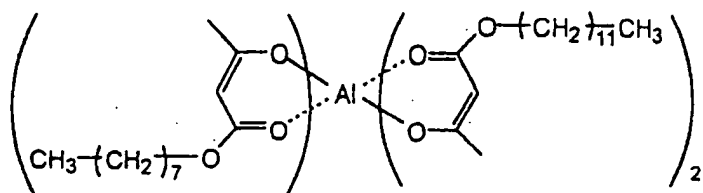
(II-1)

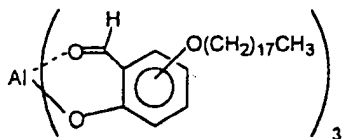
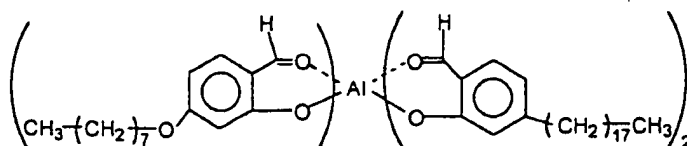
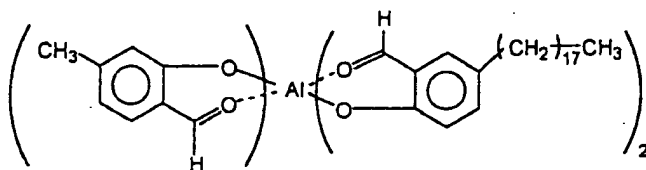
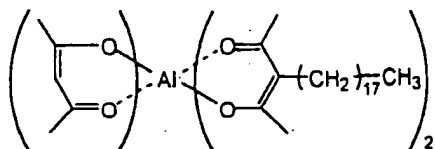


(in the general formula, R^{21} , R^{22} , R^{23} , and R^{24} may be identical to or different from each other, and which are a hydrogen atom, a substituted or nonsubstituted hydrocarbon group of a carbon number of 1-30, respectively, provided that there are contained at least one of R^{21} , R^{22} , R^{23} , and R^{24} having a carbon number of not less than 10 in one ligand; M is Al; “n” is 3), and

at least one compound selected from the group consisting of organosilane having an aryl group bonded directly to a silicon atom and having a hydroxyl group or a hydrolyzable group bonded directly to a silicon atom, a phenol compound, an organosilicon compound compound having a hydrolyzable group bonded directly to a silicon atom, and a silicon compound capable of generating silanol upon irradiation of light.

55. (previously presented): A solvent-based coating composition according to claim 54, wherein said compound represented by the formulas (II-1), (II-2) and (II-3) is selected from the group consisting of tris(octadecylacetoacetate) aluminum, tris(hexadecylacetoacetate) aluminum, tris(tetradecylacetoacetate) aluminum, tris(dodecylacetoacetate) aluminum, tris(octylsalicylaldehyde) aluminum, tris(3-octadecylacetylacetate) aluminum, and compounds represented by the following chemical formulas:





Claims 56-57. (canceled).